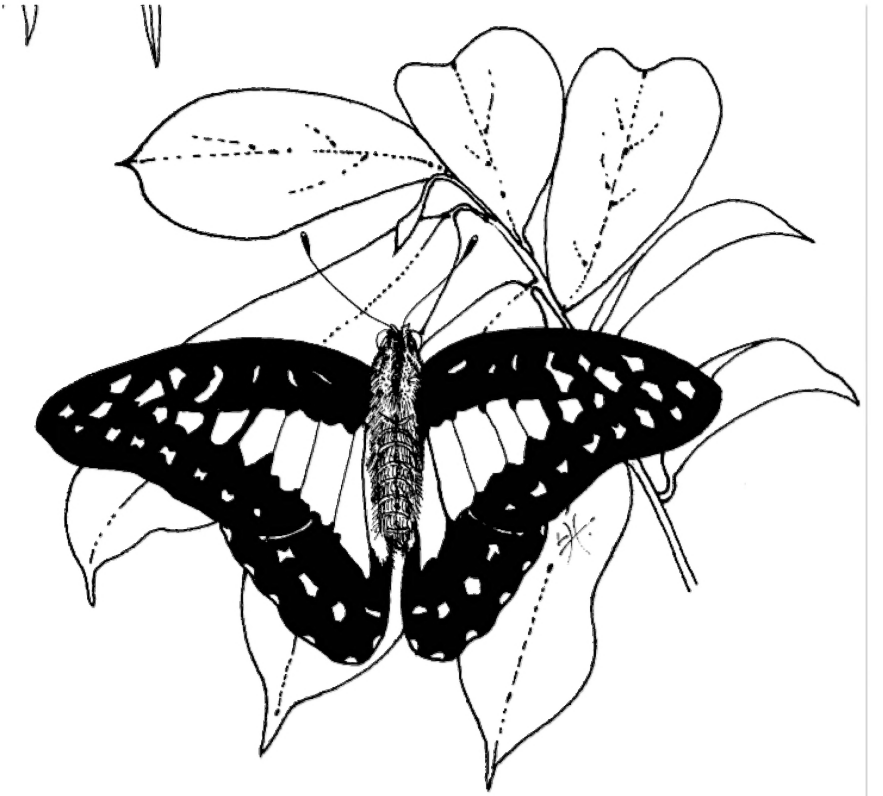

Graphium eurypylus lycaon

Butterfly & Other Invertebrates Club Inc. Newsletter

ISSUE NO: 21 DATE: JUNE, 2001 ISSN: 1236-0006

CLUB PLANNING AND ORGANIZING GROUP - 2001

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Register of Host Plants:	Rob MacSloy	07 3824 4348
Publicity:	Lois Hughes	07 3206 6229

PLANNING AND ORGANIZATION MEETINGS

A quarterly meeting is scheduled in order to plan club activities and the newsletter. See BOIC Programme.

CONTACT ADDRESS

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AIMS OF ORGANIZATION

- To establish a network of people growing butterfly host plants;
- To hold information meetings about invertebrates;
- To organize excursions around the theme of invertebrates e.g. butterflies, fireflies, ants, dragonflies, beetles, freshwater habitats, and others;
- To promote the conservation of the invertebrate habitat;
- To promote the keeping of invertebrates as alternative pets;
- To promote research into invertebrates;
- To encourage the construction of invertebrate friendly habitats in urban areas.

NEWSLETTER DEADLINES

If you want to submit an item for publication the following deadlines apply:

March issue – February 21st
June issue – May 21st
September issue – August 21st
December issue – November 21st

EDITORIAL

Our first public workshop, held for World Environment Day on Saturday June 2nd at the Indigiscapes Centre in the Redlands Shire, was a resounding success. Judging by the feedback, it was given high marks. Thanks goes to Daphne, John and Lois for the organisation of this event, the speakers, all the Club members who helped on the day and stall holders.

If you are a new member of the Club, we hope you enjoy the newsletter. It is our 21st issue. We welcome all member's contributions. This issue sees a range of contributors. Thank you for your efforts. We also welcome all members to our quarterly planning meetings. They are a good place to meet with others who are interested and have lots of information to share.

Helen Schwencke

IN THIS ISSUE

EXCURSION REPORT

Alexandra Hills Conservation Area - Sunday 25th March 2001

This reserve is well known mostly because of the gliders and uncommon frogs which make their home there. Although it was late in the butterfly season there was a surprisingly large variety to be seen, though some were obviously passing through.

One unusual part of the walk involved examining a large dead branch which had recently fallen off an old gum tree. It contained the old remains of a native stingless bee nest. Bits of the remaining wax were being scavenged by a different species of native bee which had a red abdomen.

Except for some small, unidentified skippers and blues the following butterflies were recorded for the day:
Blue Triangle, Glasswing, Lemon Migrant, Orchard Swallowtail, White-banded Plane, Meadow Argus, Blue Tiger, Common Grass-blue, Common Crow, Orange Ringlet, Evening Brown, Small Green-banded Blue, Black Jezebel, Large Grass-yellow, Yellow Migrant, Varied Eggfly, Dainty Swallowtail, Chequered Swallowtail.

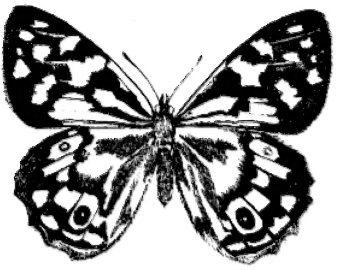
Thanks to Steve Homewood for arranging the walk.

Frank Jordan

REPORTS

Tenterfield Revisited

This, the fourth butterfly survey by club members to the Southern Highland border area, took place on the weekend of the 3rd, 4th and 5th of March, 2001, just 5 weeks after the previous visit of the 27th to 29th January (see report BOIC Newsletter No. 20). At that time Graham Forbes reported seeing females only of Common Browns (*Heteronympha merope*) whereas 3 weeks earlier there were mostly males present. Also Graham had reported many male Spotted Browns (*H. paradelpha*) which were not present on the visit earlier in January.

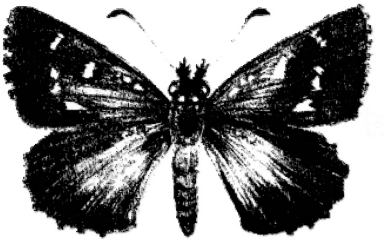


Heteronympha paradelpha - Spotted Brown

On this occasion, our visit to Mt. Mackenzie was rewarded by the presence of myriads of (mostly female) Spotted Browns and a few Shouldered and Banks' Browns (*H. penelope* and *H. banksii* respectively), but no Common Browns were encountered. Also there were

only a few tatty Marbled and Klug's Xenicas (*Geitoneura acantai* and *G. klugii* respectively) present, whereas on both visits in January they were both common and fresh.

The hilltopping Imperial Jezebels (*Delias harpalyce*), Eastern Flats (*Netrocoryne repanda*), Bright Shield-skippers (*Signeta flammeata*) had vanished, but their place had been taken by two new skippers, the Chequered and Mottled Grass-skippers (*Anisynta tillyardi* and *A. cynone* respectively) which exhibit beautiful creamy-yellow and rich brown markings on the underside of the wings. The record of *A. cynone* at Mt. Mackenzie appears to be a new distribution record for this species. Braby (2000) mentions it from Bolivia Hill, about 50 km further south, where we subsequently encountered it on the following day.



Anisynta tillyardi –
Chequered Grass- skipper

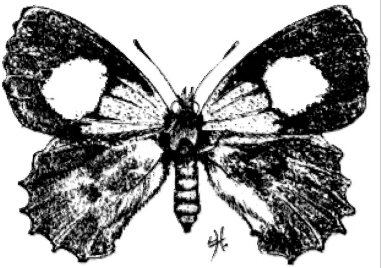
The only other butterfly of note at Mt. Mackenzie was the Imperial Hairstreak (*Jalmenus evagoras*), a small colony containing larvae, pupae, adults and attendant ants being found on *Acacia irrorata*, near the base of the mountain.

Bolivia Hill produced several skipper species. In addition to the Mottled Grass-skipper, the slightly larger Chequered Grass-skipper (*A. tillyardi*) was also present as well as the smaller Barred Skipper (*Dispar compacta*) and Banded Grass-skipper (*Toxidia parvula*). A single specimen of the skipper Orange Ochre (*Trapezites eliena*) was also found plus many larvae (on Stinging Nettle) and adults of the Yellow Admiral (*Vanessa itea*).

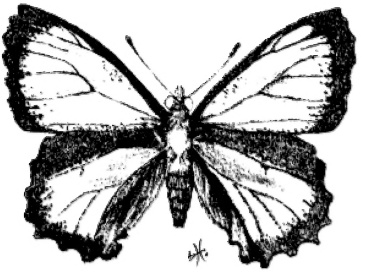
One further skipper, a female of the Yellow Ochre (*Trapezites lutea*), was found , having just emerged from its pupa near the base of its hostplant *Lomandra filiformis*, alongside a disused railway line. Further along the track, within a rock cutting we found large numbers of both Orange and Rock Ringlets (*Hypocysta adiante* and *H. euphemia* respectively. It was in this railway cutting that Russell upset a very large Red-bellied Black Snake sunning itself near the tracks.

Before leaving the Bolivia Hill area we had one more exciting butterfly discovery. Flying around the mistletoe *Muellerina eucalyptoides*, which was parasitising a rough-barked *Angophora* (either *A. subvelutina* or *A. floribunda*), were two or three female Dark Purple Azures (*Ogyris abrota*). Pupae of this species and the duller *Ogyris olane* were found under the loose bark of eucalypts in this general area. On their emergence, a few weeks later, the resulting adults became subjects of a photographic record.

The return trip to Brisbane took in the Basket Swamp area and we again noted early instar larvae of the Yellow Jewel (*Hypochrysops byzos*) on *Pomaderris lanigera.* However, there was a dearth of montane Swordgrass Browns (*Tisiphone abeona regalis*), the few seen being quite worn and tatty.



Ogryis abrota – female



Ogryis abrota - male

This had been a most successful trip with many new species sightings for the four of us and at least one new distribution record (for our Mottled Grass-skipper). It is proposed to continue the butterfly surveys in the area with at least two more return trips (in the Spring and early Summer of 2001).

John Moss

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BOIC Butterfly and Habitat Workshop at the Redlands Indigiscapes Centre, Saturday 2nd of June 2001

June 2nd dawned warm and bright, a beautiful day for our first butterfly workshop. Some people traveled very long distances to join with club members and locals eager to learn about butterflies and their exacting requirements and they weren't disappointed. 90 people in all attended, with late enquirers having to be turned away because of seating restrictions.

Indigiscapes was buzzing with activity as the monthly plant sales commenced early and people took advantage of the guided bushland walks and plant talk.

The club mounted a colourful and interesting display of butterfly and insect themed craftwork as well as posters, other club related information and butterfly books. A wide variety of butterfly host and nectar plants from various sources were eagerly sort out . Framed and mounted prints of the Laced Fritillary as well as a colourful display of butterfly cards from my originals were all presented for sale for the first time and mounted butterfly specimen displays all added to the atmosphere.

Raffle tickets for the very first print of the Laced Fritillary were eagerly sort and a delighted Anne Collins was the eventual happy recipient. The speakers presented a wide range of butterfly, habitat and related topics to an enthusiastic and responsive audience eager to learn. Each participant received a folder containing a wealth of information for later perusal.

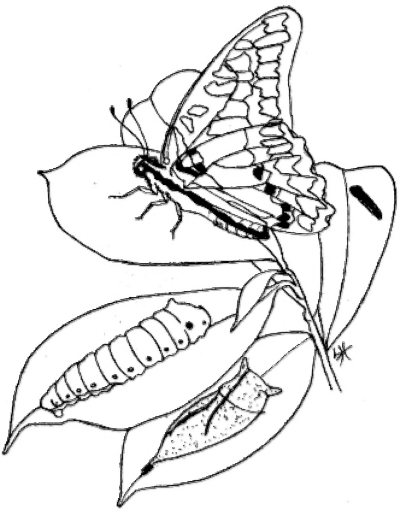
A delicious and substantial afternoon tea was a welcome diversion and gave an opportunity to circulate. A big thanks to Daphne, Terri and Bob who made it all happen.

Thanks also to John for his great effort and the many other dedicated people whose contribution made this a very successful occasion. A big welcome also to the new members who joined as a result. A great team effort.

Lois Hughes

CREATURE FEATURES

Pale Triangle (*Graphium eurypylus lycaon*)



Adult, larvae and pupa of Pale Triangle on one of its host plants - Soursop

Anybody who has owned a custard apple tree will be very familiar with the larvae of this butterfly, as they are quite commonly found upon it. They are actually very interesting larvae, varying in colour depending on the stage of their lifecycle. They start life black, slowly turning brown, then bright red, gradually turning orange, then green and finally blue just before pupation occurs.

The pupae are always light green, and very hard to detect as they hang upside down under a leaf of the food plant. Even after finding one, the next time you look it seems to have mysteriously disappeared.

The butterfly is of medium size, being approximately 50-60mm from wingtip to wingtip, and as the name implies, the main recognisable feature is a large,

pale blue, green or yellow triangle on each side of their wings.

There is another similarly marked butterfly in South East Queensland, the Blue Triangle (*Graphium sarpedon*), but instead of the triangles on the wings being coloured as above, they are actually a bright blue and therefore are fairly easy to distinguish apart.

The adults will readily be attracted to any nectar bearing flowers you may have in your garden, their wings continually moving as they drink.

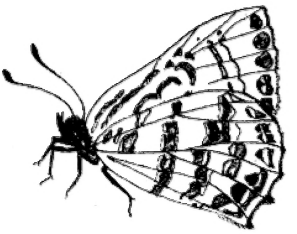
Apart from the previously mentioned Custard Apple*, (Annona reticulata),* the larvae also feed quite readily on Soursop, *(Annona muricata)* . The best of the native food plants I have found, is Zig-Zag vine, *(Rauwenhoffia* (now *Melodorum*) *leichhardtii).* If you have any of these plants growing, you will certainly get larvae on them.

Bob Miller

****

New Site for Rare Bulloak Jewel, *Hypochrysops piceata*

The writer attended the Queensland Naturalists' Club 2001Easter camp from April 13th-16th April which was held at the cattle property of Gavan Lahey, situated about 35 km north-east of Goondiwindi. The country is a patchwork of eucalypt woodland on loamy soil, Bulloak and "Cypress" pine forest on poor sandy soil and Brigalow/Belah on heavy black clay soils. Adjoining the property on the south is the 11,000 acre Bendidee State Forest and the 2,000 acre Bendidee National Park – both of which contain undisturbed representatives of these forest types. In particular there are some large mature Belahs (*Casuarina cristata*) and Bulloaks (*Allocasuarina luehmannii*).



Bulloak Jewel

The writer considered the latter habitat suitable for the small and rare "Darling Downs" (now "Bulloak") Jewel (*Hypochrysops piceata*) as mature borer-holed Bulloaks, the host tree, were present as well as colonies of the butterfly's attendant ant, the repulsive smelling *Anonychomyrma* sp (*itinerans* group).

Subsequently, with assistance from son Ronald and fellow Nat. Jill Don, the Bulloak treetops were scanned with binoculars for evidence of the little butterfly. Once the first one was spotted, many others soon appeared – some flying with the usual silvery appearance, and others resting characteristically head down on flimsy branchlets at the top of the trees. Some also flew around and perched on adjacent Angophoras. At one stage a female flew right down to within less than a metre from my face –

unfortunately without my net handy it was not possible to collect this as a voucher specimen, but it did confirm the identity with certainty.

Currently this butterfly is known only from a limited area on the Darling Downs at Leyburn. The butterfly has not been seen in recent years at its original collecting site at Millmerran, which is between Leyburn and this new site at Goondiwindi. There have been other unconfirmed sightings at Cecil Plains (M. DeBaar pers.com.) and a single roadside sighting nearer to Goondiwindi (D. Sands pers.com.). It quite possibly exists in the vast Barakula State Forest to the north of Chinchilla where there are still scattered stands of mature Bulloak.

John Moss

PLANT PROFILE

Soursop (*Annona muricata*)

The Soursop is one of the relatives of the custard apple. It has the largest fruit of this group, up to 20cm long and up to 3kg in weight. The short fleshy spines on the fruit give it a reptilian look. The fruit is sweet but also tangy and acidic.

Leaves and Fruit of Soursop (*Annona muricata*)

The tree is slow growing, eventually reaching about 5 metres. It has glossy green leaves and unusual flowers (hidden inside the calyx) which grow from the trunk and main branches. In some varieties hand pollination of these flowers results in a better fruit set. It does not have the large spreading habit of the custard apple so would be more acceptable in a suburban garden. The tree is frost tender and, in Brisbane, mine loses all its leaves in winter even when there is no frost. The tree likes a lot of water and responds well to fertilizer. There are named varieties available but I grew mine from seed.

Caterpillars of the Pale Triangle (*Graphium eurypylus*) (formerly known as the Pale Green Triangle) feed on the leaves. The round eggs are usually laid on the fresh young leaves. The caterpillars go through several colour changes, from black when very small, to a rusty brown during the middle stages, becoming green in the final instar.

The Pale Triangle, comes in yellow, pale blue and pale green. Why don't you find out which of the colour forms you first get when you grow this tree as a host plant in your garden.

Frank Jordan

Growing *Aristolochia tagala* in the Garden to Attract the Richmond Birdwing

Why is it that the tropical, native dutchman's pipe vine, *Aristolochia tagala* (Aristolochiacae), has never been included in organised attempts to reintroduce the Richmond Birdwing, *Ornithoptera richmondia* (Papilionidae), in altered landscapes in south-east Queensland and north-eastern New South Wales, when there are practical advantages in doing so? Only one host plant species, *Pararistolochia praevenosa*, has been the focus of community-based programmes. Ultimately, the desired outcome is to re-establish permanently viable Richmond Birdwing populations without any negative impacts, into areas where they have become locally extinct, and in new areas within the butterfly's range which did not originally support *Pararistolochia praevenosa*.

As any successful reintroduction programme requires extensive community support, especially in urbanised areas, it makes sense to assess and include any possibilities which will encourage community participation. Below is a review of the potential value of *Aristolochia tagala* to Richmond Birdwing re-establishment programmes and butterfly-oriented gardeners, based upon decades of combined hands-on experience, from commercial breeders to enthusiasts.

Description:
Aristolochia tagala is a fast growing, twining vine from Asia and lowland rainforests in Australia south to Townsville. The leaves are soft, large and heart-shaped to 30 cm x 15 cm. Clusters of small, tubular, maroon flowers may occur at any time of the year and although unspectacular, are a curiosity. These flowers are pollinated by tiny ceratopogonid midges. The squat, oblong seed capsule is divided into six sections which dry and split to reveal several hundred dry, heart-shaped seeds.

Advantages of Growing *Aristolochia tagala* to Attract the Richmond Birdwing:
1. *Aristolochia tagala* is a host plant for two spectacular butterflies within the Richmond Birdwing's range, including the Clearwing Swallowtail,(=”Big Greasy”) *Cressida cressida*, and the Richmond Birdwing itself. In tropical Queensland gardens, *Aristolochia tagala* has been successfully cultivated for many years as a butterfly host plant for the Northern Birdwing, *Ornithoptera priamus*, the Clearwing Swallowtail and the Red-bodied Swallowtail, *Pachliopta polydorus*.

2. *Aristolochia tagala* has much practical and ornamental appeal to gardeners; it is easy to propagate and control, and produces lush, tropical foliage.

3. The vine is large and fast-growing, providing an abundant, rapid supply of leaves under suitable conditions, and is able to recover quickly from voracious caterpillar attack which often involves the ring-barking of stems (*Aristolochia tagala* can grow at

many times the rate of *Pararistolochia praevenosa* under similar conditions; experience suggests about 10+ times faster).

4. Due to its softer leaves, *Aristolochia tagala* has much greater butterfly carrying capacity per volume of leaves than *Pararistolochia praevenosa* with a much reduced incidence of cannibalism commonly found on this tougher leaved species.

5. *Aristolochia tagala* has negligible weed potential. On the contrary, its relative lack of hardiness may be seen as a slight disadvantage (see below).

6. Many habitats that previously harboured the Richmond Birdwing have been lost or have become too altered to naturally support *Pararistolochia praevenosa* and now provide more suitable growing conditions for *Aristolochia tagala*. *Aristolochia tagala* will grow in full sun to light shade, which do not favour soft leaf growth in *Pararistolochia praevenosa* (required by egg-laying female Birdwings) therefore providing gardeners with a greater opportunity for attracting and cultivating Birdwings.

7. When grown together, *Aristolochia tagala* can enhance growth and establishment of *Pararistolochia praevenosa* on a mature support tree by providing added scaffolding for climbing and extra shade, both of which encourage *Pararistolochia praevenosa* to produce new, softer growth. By adding an *Aristolochia tagala* vine to the same support tree, I managed to encourage much faster and more spreading growth from a *Pararistolochia praevenosa* vine which in two years had not grown more than 30 cm despite a regular supply of water and nutrients.

8. Female Richmond Birdwings are attracted to and readily lay eggs on *Aristolochia tagala*.

Perceived Disadvantages of Growing *Aristolochia tagala* to Attract the Richmond Birdwing:

1. *Aristolochia tagala* is frost- and drought-tender (but see growing notes below).

2. During hot, humid weather *Aristolochia tagala* can become prone to disease.

3. Toxic reactions around birdwing eggs on young leaves of *Aristolochia tagala* can cause mortality among caterpillars.

4. *Aristolochia tagala* is not indigenous to the range of the Richmond Birdwing.

5. *Aristolochia tagala* may have some weed potential in urban areas and in remnant Birdwing habitat.

All of these perceived disadvantages are not realised in actual growing situations, or at least not in a significant way. Vines can easily be protected from dry weather, wind and frost (if in prone areas) in the same way as for many exotic garden plants, by using appropriate placement, mulching and water management. Once vines are

established, they don't appear to be as prone to fungal attack as young plants. My *Aristolochia tagala* vines became more resistant to dry conditions once established as evidenced by their healthy condition during severe drought conditions in 2000.

As previously noted, *Aristolochia tagala* has little weed potential unlike the introduced dutchman's pipe, *Aristolochia elegans*. Seeds, which often germinate erratically, are not spread by birds but by wind and usually within short distances from the parent vine. Of those seeds that do germinate, most or all die from a lack of moisture and exposure. The few individuals which germinate in suitable conditions are often annihilated by larvae if the commoner Clearwing Swallowtails before climbing a structure. In elevated birdwing habitats such as the Border Ranges, frosts would further prevent *Aristolochia tagala* obtaining a foothold unaided. Despite *Pararistolochia praevenosa* being hardier than *Aristolochia tagala* in cold and dry conditions, it also lacks the tendency for weediness.

Although *Aristolochia tagala* can produce a toxic and deadly reaction around birdwing eggs, its effects are insignificant on overall mortality. According to one professional breeder who primarily used *Aristolochia tagala*, lizards were the main cause of mortality among caterpillars. Female Richmond Birdwings commonly lay most of their eggs on the new shoots and older leaves which generally appear to elicit sub-lethal or no reactions. The reduced incidence of cannibalism and greater carrying capacity appear to more than compensate for eggs and young caterpillars that may succumb.

When you consider the number of non-indigenous (i.e. not native to locality or region) plants there are to be found in most urban gardens (including 'native' gardens) many of which are exotic and some with high weed potential (e.g. camphor laurel, golden rain tree, chinese elm, Singapore daisy etc.), the complaint that *Aristolochia tagala* is non-indigenous seems precious given its nature. Why complain about the agent when it helps to safely fulfill the conservation aim? Many members of the BOIC, including myself, grow a variety of native butterfly host plants that, although not indigenous to the local area or region, help to bring to life the often sterile, urban gardenscape.

Notes on Growing *Aristolochia tagala* in the Garden:
Propagation:
Aristolochia tagala is easily grown from seeds and cuttings, although seed viability and germination can be variable. Sow several hundred of the heart-shaped seeds upside-down in standard seedling mix in a tray, and place them in part shade. If the weather is cool and/or dry during the warmer months, cover to create a mini greenhouse effect . The seeds need to be kept moist but not soaking. Then select the most vigorous seedlings for individual tubes and pots, and add a small garden stake to support the seedlings' growth.

Planting Requirements:
Young vines can be planted in dappled to heavy shade. They can start in full sun but young, tender leaves may burn or wilt quickly if not used to full sun. Mature vines will seek full sun exposure at the top or side of any structure forming a dense mat. I have grown *Aristolochia tagala* in nutrient-poor, sandy loam and red clay schist successfully. It's preferable to raise the planting bed and add either gypsum or liquid clay breaker (depending on clay type) in poorly draining clay soils. Mulching is a necessity; ideally about 15 cm of composted organic matter.

Watering:
Aristolochia tagala naturally grows in the wet tropics and must be kept moist to promote new growth and prevent leaf drop. Young vines may require daily watering in dry conditions while established vines are less dependent.

Fertilising *Aristolochia tagala*:
Aristolochia tagala can be prone to nitrogen deficiency and responds rapidly to fertilising during the warmer months. Standard, slow release fertilisers (e.g. Osmacote, Ferticote, manure pellets etc.) are probably best to prevent vines from becoming too sappy from excess nitrogen; a condition which may affect caterpillar survival. I use mostly organic fertilisers such as seaweed and fish concentrates, and manures supplemented occasionally with reduced strength dose of liquid fertiliser if leaves are yellowing. Vines may also exhibit yellowing leaves before leaf-drop in dry conditions.

Controlling *Aristolochia tagala* Growth:
This vine responds well to pruning but can be a clumsy climber on larger trees due to its lack of climbing appendages (e.g. tendrils), so requires some help initially to gain purchase on a structure. This tendency for new shoots to fall over themselves helps to create an attractive, dense, clumping mat of leaves around the trunks of trees and other supports. I usually plant vines between 0.5 to 1.0 meters from the base of a tree and place a stake further away in line with tree and vine; then I tie a guide rope (old stockings work well) from the base of the stake to the tree at a steep angle with the vine twined on or attached to the guide.

Support Structures:
Aristolochia tagala can be grown on mature trees which do not shed bark in strips or sheets. Suitable artificial structures include pergolas, fences, walls, lattice work, etc. Dead or dying trees can become useful as support structures. Poisoning exotic weed tree species and then using them as structures for native vines can help to quickly fill the hole left by the loss of foliage. If your garden is small and/or you do not have any suitable support structures/trees for *Aristolochia tagala*, you can buy cheap garden arches made from either coated steel or treated pine from the local hardware (price range $50-$100). These frames are excellent to contain *Aristolochia tagala* (and other

vines) to eye level and allow easy control and maintenance, and may be preferred even when other structures are available.

Disease Control:
Fungal disease in hot, humid weather may be controlled by foliar spraying of Yates "Antirot" (phosacid-a systemic fungicide). Selecting the most vigorous seedlings and improving drainage at planting sites should reduce or eliminate disease problems.

Availability:
The most likely way of obtaining *Aristolochia tagala* is as seed from other BOIC members who grow the vine. I have never seen *Aristolochia tagala* at a commercial nursery, although some specialist native nurseries may have it.

Most people buy *Pararistolochia praevenosa* vines solely to attract the Richmond Birdwing, little realising that it may be 10 years before the vine will be large enough to entice and support voracious birdwing caterpillars, and this assumes the vine has been planted in a suitable position and cared for in the meantime. Urbanised landscapes rarely provide conditions suitable for growing 'Richmond Birdwing ready' *Pararistolochia praevenosa* vines. Community-based conservation programmes usually work more effectively when more options are available which accommodate the variety of conditions participants experience.

Richmond Birdwing adult and larva on
Pararistolochia praevenosa

Clearly, the added option of growing the more ornamental and quicker growing *Aristolochia tagala* in urbanised areas can only result in more host plants being grown in more localities, inevitably resulting in more birdwings. Already there have been many thousands of *Pararistolochia praevenosa* vines planted in schools, parks, rainforest regeneration areas etc. in many localities in and around Brisbane and yet there has not been an escalation of independent Birdwing sightings since plantings began; maybe the Richmond Birdwing would like a choice too!

James Beale

PART 5 - HEATHLAND AND WETLAND GARDENS

A heathland garden requires full sun and very well-drained soils and is really like a dry sclerophyll garden but lacking the tree canopy. The same gardening principles apply as to dry sclerophyll gardens with emphasis on raised beds, but with access to moisture at depth. This can be achieved by channel and mound design or with a dripper system of irrigation.

Many colourful shrubs can be grown in this garden together with matrushes, groundcovers, annuals and hardy clumping grasses. This type of garden also lends itself to the planting of nectar species such as *Pimelea* sp., *Bracteantha*, *Leucopogon?, Bursaria spinosa*, *Micromelum minutum*, *Pavetta australiensis* and *Westringea eremicola.*

A successful wetland area can be achieved by anyone with a low section on their property or even if the land is sloping, a small boggy area can be created by digging a depression to catch the run-off. Lining with plastic or a pond liner if requiring a pond, may be necessary to prevent the moisture from draining away. Quite a few butterflies utilise sedges and rushes which are the typical plants of such areas.

Larger areas can be planted with a few moisture-loving trees, such as *Melaleuca quinquenervia, Melaleuca sieberi, Melaleuca linariifolia* and *Callistemon salignus*, which have good nectar at certain times of the year.

An understorey of large and small sedges fill in the ground layer. These plants are fast-growing, spread easily and are rewarding to grow, but will require extra water in dry periods.

Larger Sedges and Wetland Plants

Carex appressa (Tall Sedge) - Spotted Skipper
Cladium procerum (Leafy Twigrush) – Southern Sedge-darter
Gahnia clarkei (Tall Sedge) - Swordgrass Brown, Spotted Skipper, Painted Skipper
Gahnia sieberiana (Redfruited Sawsedge) - Flame Skipper, Donnysa Skipper, Swordgrass Brown, Spotted Skipper
Lomandra hystrix (Riverine Matrush) – Maheta, Iacchus and Symmomus Skippers

Smaller Sedges and Wetland Plants

Alternanthera denticulata (Lesser Joyweed) - Common Eggfly
Carex brunnea (Rainforest Sedge) - Spotted Skipper

Carex polyantha - ?
Cyperus spp. (Sedges) - Six-spot Skipper (now "Riverine Sedge-skipper)
Fimbristylis spp. (Fingerushes)
Hygrophila angustifolia -Chocolate Soldier, Tiny Grass Blue, Blue Argus
Lythrum salicaria (an ornamental)
Ludwigia peploides (an ornamental)

Vines

Cynanchum carnosum (Mangrove Milk Vine) - Black and White Tiger, Lesser Wanderer
Parsonsia straminea ((Common Silkpod) - Common Crow, also excellent nectar plant

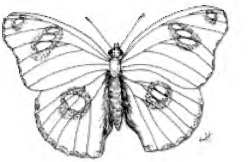
Herbs

A small corner of the garden could be thrown open to the creation of a rather untidy and weedy type of garden which could become a haven for butterflies. The criteria which would have to be met for such a style of garden would be:

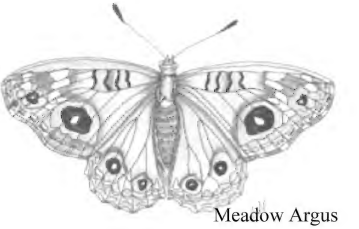
1. Sun for most of the day
2. Not in view from most parts of the house
3. The owner would have to be one of those very rare people who put nature ahead of their own primitive European view of a world of pruned trees set in perfect lawns.

This 'style' of garden is very low maintenance provided that the plants are able to "do their own thing". Undesirable weeds such as Asparagus, Scotch Thistles and other non-butterfly friendly species can be hand pulled from time to time. The addition of blood and bone will benefit the rapid growth of the weedy plants and help to keep fresh soft leaves coming on.

Some examples of these plants and the butterflies that they attract are listed below:
Alternanthera denticulata (Lesser Joyweed) - Common Eggfly
Ammobium alatum - Painted lady
Bracteantha bracteata (Paper Daisy) - Painted Lady
Canavalia spp. - Dark Cerulean
Chamaecrista nomame (*Cassia mimosoides*) - Grass Yellow
Cassytha spp. (Dodder) - Blotched Blue, Small Dusky Blue
Centaurium spicatum - Meadow Argus
Cullen tenax - Chequered Swallowtail
Desmodium heterocarpon - Common Grass Blue, Tailed Cupid
Gnaphalium spp & *Pseudognaphalium* spp. - Painted Lady
Hybanthus stellarioides - Small Greasy (Glasswing)
Hygrophila angustifolia (plant in wet spots) - Tiny Grass Blue, Chocolate Soldier
Hypoestes floribunda - Blue Argus


Common Eggfly

Indigofera hirsute- Grass Jewel,Pea Blue,Common Grass Yellow,Common Grass Blue
Oplismenis aemulus (Creeping Beard Grass)- Doubleday's Skipper
Oxalis corniculata (Yellow Wood Sorrell) - Small Copper
Plantago spp. - Meadow Argus, Rayed Blue
Plumbago zeylanica (Native Plumbago) - Zebra Blue
Portulaca oleracea - Eggflies, Meadow Argus
Rostellularia adscendens (Justicia species) - Blue Argus
Scaevola aemula, *S. ramosissima* (Fan Flowers) - Meadow Argus
Senna spp. (Cassias) - Grass Yellow
Sesbania cannabina - Pea Blue, Large Grass Yellow, Cupid
Sida rhombifolia - Common Eggfly
Tribulus terrestris - Dark Grass Blue
Urtica spp. - Australian Admiral
Verbena spp. - Meadow Argus
Veronica plebeia - Meadow Argus


Meadow Argus

Summary

All good things come to those who wait. Your butterfly garden has now been created, but where are the jewels of the insect world? If you live near healthy and diverse bushland, your wait will be short. Inner city or suburban yards may take longer to attract butterflies which must find your little piece of heaven, but if your plants are healthy and abundant and the correct species, the butterflies may settle down to breed there. ***Graham McDonald***

BUTTERFLY OBSERVATIONS

Butterfly observations at Mudgeeraba – Gold Coast

1. Male Blue Argus *Junonia orithya albicincta* seen flying low along gravel track, settling occasionally at Hinterland Regional Park, Mudgeeraba. This insect was a male 'summer form' newly hatched. This is a very rare sighting as they are uncommon south of Gladstone. Host plants planted here a year ago are Love Flower *Pseuderanthemum variabile* and *Hygrophila angustifolia*. Sighted on 27 April 2001.
2. Green Awl *Hasora discolor* on its host vine *Mucuna gigantea* at a remnant lowland rainforest area near Mudgeeraba Bowling Club on Bonogin Creek. Sighted on 30 April 2001.
3. Brown Ringlet *Hypocysta metirius* seen ovipositing on Graceful Grass *Ottochloa gracillima*. This is a new host plant record if the larvae feed on

this grass (not seen). Both the grass and butterflies are plentiful in this area at 12 Pharlap Avenue, Mudgeeraba. Sighted in Late March.

Graham McDonald

Butterfly Observations at Goodnight Scrub

Please find enclosed a copy of the results of a survey I conducted at "Goodnight Scrub National Park" approx. 25 km west of Hervey Bay, on the 13th March, 2001.

We were there between 12 noon and 2.30 pm. The day was slightly overcast and the temperature was about 30deg. C.

The survey was not an official one, but because we were in a National Park and so couldn't keep any specimens, we kept a visual record. Most of the specimens mentioned were quite common on the day!

I just thought the list might be of interest to our readers.

Bob Miller

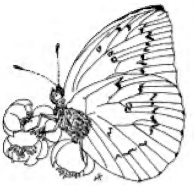
N.B. Exotic "Dutchman's Pipe Vine" *Aristolochia elegans* is present throughout the Park

Adults of the following butterflies were sighted – *Acraea andromacha andromacha* – Glasswing ; *Appias paulina ega* – Yellow Albatross; *Belenois java teutonia* – Caper White; *Candalides hyacinthina hycinthina* – Varied Dusky Blue: *Candalides margarita* – Trident Pencilled Blue; *Catopsilia gorgophone gorgophone* – Yellow Migrant; *Catopsilia pyranthe crokera* – White Migrant; *Catopyrops florinda halys* – Speckled Line-blue; *Cepora perimale scyllara* – Caper Gull; *Cressida cressida cressida* – Clearwing Swallowtail; *Cupha prosope prosope* – Bordered Rustic; *Danaus chrysippus petilia* – Lesser Wanderer; *Danaus plexippus* – Monarch; *Delias nysa nysa* – Yellow-spotted Jezebel; *Euploea core corinna* – Common Crow; *Eurema herla* – Pink Grass Yellow; *Graphium eurypylus lycaon* – Pale Triangle; *Graphium sarpedon choredon* – Blue Triangle; *Hypocysta metirius* – Brown Ringlet; *Lampides boeticus* – Long-tailed Pea-blue; *Leptotes plinius pseudocassius* – Plumbago Blue; *Nacuduba berenice berenice* – Large Purple Line-blue; *Papilio aegeus aegeus* – Orchard Swallowtail; *Papilio demoleus sthenelus* – Chequered Swallowtail; *Papilio fuscus capaneus* – Fuscous Swallowtail; *Phaedyma shepherdi shepherdi* – White-banded Plane; *Psychonotis caelius taygetus* – Small Green-banded Blue;

Tirumala hamata hamata – Blue Tiger; *Vanessa itea* – Yellow Admiral; *Ypthima arctous arctous* – Dusky Knight; *Zizina labradus labradus* – Common Grass Blue.

Larvae, pupa and adult of *Ogyris zosine zosine*

Small Green-banded blue



Yellow Migrant

Lesser Wanderer

REVIEW

Little pieces, big pictures (by Karl-Olof Bergman):

A Review by David Barnes

The above article appeared in the BBC Wildlife August 2000 Volume 18 No 8. It talks about the effects of habitat loss and fragmentation on wildlife using studies on butterflies as an example. It asks the question: "What happens when habitat is left only as a series of islands scattered across a human-tampered landscape?" Butterflies provide good study subjects because they have short generation spans, small territories and it is easy and cheap to capture and mark lots of individuals. Butterflies provide important general information about what happens to a species when its habitat is being cut up into small pieces.

It was found that for two of the European butterfly species studied that not all areas of suitable habitat patches were occupied. One explanation given was that the patches were too small. For one species studied on British heathland revealed that extinctions had occurred in 80% of the sites under 0.2 ha and that the larger the area, the slower the rate of extinctions. In small patches of habitat it is vital that neighbouring populations are close by to allow for the exchange of individuals. Even in larger areas exchange is necessary to keep populations healthy by avoiding inbreeding. Inbred butterflies have a shorter life span, have a higher mortality during the larval stage and have fewer eggs that hatch.

The ability to disperse across a patchy landscape is another key factor in species' survival. When the number of patches of suitable habitat has decreased and the distance between them has increased above a certain threshold, studies of butterflies show that whole populations can suddenly go extinct. In one species, a distance of 210 metres between patches of habitat was sufficient to prevent colonisation. In another species the maximum distance flown was 670 metres from the point of capture. If all the habitat patches are so scattered that there is no contact between them, the species will slowly become extinct, though the process may take 100 years or more.

Studies of three species indicate that butterflies need in the order of 15-20 habitat patches, as a minimum, in order to have a high probability of long-term survival -

providing they are within the species' dispersal range. Less than ten sites appear to be too few to ensure long-term survival.

Have similar studies been carried out on Australian butterfly species? It seems to me that such studies are vital in order to ensure the long-term survival of our own butterfly species and to maximise the effectiveness of our conservation efforts.

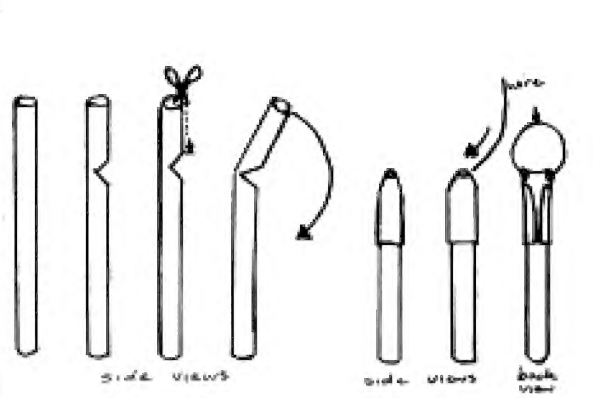
David Barnes

YOU ASKED

When I cut down the bunches of bananas on my banana trees hundreds of black shiny ants come out and run all over me and the bunch. Even though they don't sting this is very annoying. What can I do?

You have probably disturbed black tree ants (*Polyrhachis* sp.) which have built their nest in amongst the bananas. Satya Robert Smith of The Green Gardeners suggests providing a more attractive nest site for the ants. The idea is similar to providing nesting boxes to keep possums out of your roof.

He starts off with a 35cm section of 2cm wide black polypipe. Approximately 9cms from one end he cuts a notch halfway into the pipe. He then cuts a slit from the top of the notch all the way to the shorter end of the pipe. The short end is then folded over until it completely covers the pipe. A small piece of wire is then inserted through the gap in the end and attached to the growing bunch of bananas. The ants will move into the nest. When the time comes to harvest the bananas temporarily remove the nest and replace it on the tree afterwards.



LETTERS

Butterfly Host "Pants"

Towards the end of April, Jan and I were watching a female Splendid Ochre (*Trapezites symmomus*) ovipositing on (and near) its host plant *Lomandra longifolia.* This skipper is well known for laying eggs in strange places – even on the walls of houses (Bob Miller pers.com.) but we were very surprised when she landed on Jan's shorts and laid an egg – the shorts were blue and yellow checks so she didn't mistake Jan for a plant!!! Host "pants" indeed!

Rob MacSloy

Vale Ben Fryz

April saw the passing of a fine field naturalist, Ben Frys, after a long debilitating illness.

Ben was well known particularly among cicada and butterfly circles with many references to his work in Max Moulds "Australian Cicadas" especially concerning his experiences with the Greengrocer (*Cyclochila australasiae*).

Ben will be sorely missed and our sympathy and thoughts go to Sandra and family.

Rob MacSloy

THANKS

Thank you to Arthur Powter for his donation of *Pararistolochia praevenosa* plants to be sold at our recent Butterfly Workshop.

ERRATA

Issue No. 20, March, 2001

Please note that in the heading of Creature Note No. 25 the name of the Giant Dragonfly should be *Petalaura litorea* and not "*Petalaura littoralis*" as it appears. The correct name does appear half-way down the first paragraph on page 18.

WORLD WIDE WEB SITES TO WATCH

A site which includes 1. Gardening for butterflies 2. Plants that attract butterflies 3. How to care for the Richmond Birdwing Vine - http://www.nor.com.au/environment/species/birdwing/plants.html

LIBRARY BOOKS FOR LOAN

The following books are currently available for loan at meetings:-

Australia's Butterflies, by Peter Wilson
Butterfly Magic, by Helen Schwencke and Frank Jordan
Australian Cicadas, by Max Moulds
Butterflies of Australia, by Common and Waterhouse, 1981
Butterfly Watching, by Paul Whalley
Flying Colours, by Mike and Pat Couper
All Colour Book of Butterflies, by Robert Goodden
Lifecycle of the Ulysses Butterfly, Video, by Janet Richardson
Lifecycle of the Cairns Birdwing Butterfly, Video, by Janet Richardson

BACK ISSUES

Back Issues of the Club Magazine are available at a cost of $1 each plus postage (3-6 copies - $1.50. 1-2 copies $1.10)

ADS AND EXCHANGES

Sometimes you may have an oversupply of butterfly larvae and your food supply will not hold out. If this happens, contact Rob MacSloy - 07 3824 4348 - who operates the Register of Host Plants. He can put you in touch with prospective "foster parents'. Have **YOU** advised Rob of the host plants you have available?

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The poster, Swallowtails of South East Queensland, compiled by the BOIC, can be obtained from BOIC, PO Box 2113, Runcorn, 4113. The cost for members is $8 plus $5 postage and handling. Non-members $12 plus $5 postage handling.

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The Insects of Australia, including biology, taxonomy and morphology of all known Australian insect families, 2nd Edition, two hard cover volumes, eight colour plates, 2000 b&w illustrations, 1137pp., currently selling for $300 + postage on CSIRO web site, in perfect condition for $180, ph. (07) 3378 5467.

****

For sale- Framed butterflies from around the world, all bred on farms and allowed to live their lives naturally. Also available, giant birdwings (Ornithoptera) from PNG.

Very reasonable prices. Contact Cory Dale- (07) 3287 3414 for information on purchasing or about where the specimens were obtained.

****

"The Laced Fritillary" a painting by Lois Hughes. Prints now available. See enclosed flyer for special club discount.

OTHER GROUP'S ACTIVITIES

Indigiscapes Weekend

When: Saturday 4th and Sunday 5th August
Where: Redlands Indigiscapes Centre, Runnymede Road, Capalaba (off Redland Bay Road)
What: Native plant garden displays; propagation of natives; live animal displays; frog friendly gardens; displays by environmental groups; native plant retailers; foot stalls.
Contact: Kerrie Lock, Community Bushcare Officer on 3829 8835

Society for Growing Australian Plants Spring Flower Show

When: 10am-3pm Saturday 8th & 9am-3pm Sunday 9th September
Where: Mt. Gravatt Showgrounds
What: A great selection of native plants are available for sale at this show, including some of the more obscure butterfly host plants.

BUTTERFLY AND OTHER INVERTEBRATES CLUB PROGRAMME

July - September, 2001

As winter isn't a good time for invertebrates, this year we decided to hold a workshop as a major activity. This function occurred on June 2nd, and was very well attended and received. It was held at the Indigiscapes Centre in the Redland Shire.

Planning meeting and information exchange

When: Wednesday, 11th July, 2001, 7.00 pm
Where: Rob's Place, contact Daphne for details
RSVP/Contact: Daphne 3396 6334 for details of location

All members are welcome to these meetings, they are interesting as there are usually many things to discuss.

If you plan to attend any of the above events please respond to the person indicated in case, for some unforeseen circumstance, the event has had to be postponed or cancelled.

DISCLAIMER

The Newsletter seeks to be as scientifically accurate as possible but the views, opinions and observations expressed are those of the authors. The Newsletter is merely a platform for people to express their views and are not necessarily those of the BOIC. If inaccuracies have inadvertently occurred and are brought to our attention we will seek to correct them in future editions. The Editor reserves the right to refuse to print any matter which is unsuitable, inappropriate or objectionable and to make nomenclature changes as appropriate.

ACKNOWLEDGMENTS

Producing this newsletter is done with to the efforts of:

- Those members who have sent in letters and articles
- Lois Hughes who provides illustrations including the cover
- Daphne Bowden who works on layout, production and distribution
- John Moss for scientific referencing and proof reading
- Helen Schwencke who developed the overall design
- Frank Jordan for inspiration

We would like to thank all these people for their contribution

ARE YOU A MEMBER

Please check your mailing label for the date your membership is due for renewal. If your membership is due, please renew as soon as possible.
Membership fees are $12.00 for Individuals/Schools and $17.00 for family membership.

Butterfly and Other Invertebrates Club Inc.
c/- PO Box 2113
Runcorn Q 4113

Planning Meeting and Information Exchange – Wednesday 11th July